May 16, 2001

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 5

Complete if Known	
Application Number	10/055797
Filing Date	January 22, 2002
First Named Inventor	David Beach
Art Unit	1638
Examiner Name	Not Yet Assigned
Attorney Docket Number	GNCA-P03-007

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	6,326,193	12-04-2001	Liu et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	AB	WO 01/36646	05-25-2001	Cancer Res. Campaign Tech.		
	AC	WO 01/48183	07-05-2001	Devgen NV		
	AD	WO 01/75164	10-11-2001	Whitehead Inst. Biomed. Res.		
	AE	WO 02/44321	06-06-2002	Max-Planck-Gesellschaft		
	AF	WO 02/059300	08-01-2002	J & J Res. Pty Ltd		
	AG	WO 02/068635	09-06-2002	Novartis		

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[1] Applicant's unique citation designation number (optional). [2] See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	AH	Bass, B.L. Double-Stranded RNA as a Template for Gene Silencing. *Cell* 101, 235-238 (2000).	
	AI	Baulcombe, D.C. RNA as a target and an initiator of post-transcriptional gene silencing in transgenic plants. *Plant Mol. Biol.* 32, 79-88 (1996).	
	AJ	Baulcombe, D.C. Gene silencing: RNA makes RNA makes no protein. *Curr. Biol.* 9, R599-R601 (1999).	
	AK	Bohmert, K. et al. AGO1 defines a novel locus of Arabidopsis controlling leaf development. *EMBO J.* 17, 170-180 (1998).	
	AL	Bosher, J.M. et al. RNA Interference Can Target Pre-mRNA: Consequences for Gene Expression in a Caenorhabditis elegans Operon. *Genetics* 153, 1245-1256 (Nov. 1999).	
	AM	Bosher, J.M. & Labouesse, M. RNA interference: genetic wand and genetic watchdog. *Nat. Cell Biol.* 2, E31-36 (2000).	
	AN	Catalanotto, C. et al. Gene silencing in worms and fungi. *Nature* 404, 245 (2000).	

Examiner Signature		Date Considered	

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	AO	Cogoni, C. & Macino, G. Gene silencing in Neurospora crassa requires a protein homologous to RNA-dependent RNA polymerase. *Nature* 399, 166-169 (1999).	
	AP	Cogoni, C. & Macino, G. Posttranscriptional Gene Silencing in Neurospora by a RecQ DNA Helicase. *Science* 286, 2342-2344 (1999).	
	AQ	Connelly, J.C. & Leach, D.R. The sbcC and sbcD genes of Escherichia coli encode a nuclease involved in palindrome inviability and genetic recombination. *Genes Cell* 1, 285-291 (1996).	
	AR	Dalmay, T. et al. An RNA-Dependent RNA Polymerase Gene in Arabidopsis is Required for Posttranscriptional Gene Silencing Mediated by a Transgene but Not by a Virus. *Cell* 101, 543-553 (2000).	
	AS	Di Nocera, P.P. & Dawid, I.B. Transient expression of genes introduced into cultured cells of Drosophila. *PNAS* 80, 7095-7098 (1983).	
	AT	Fagard, M. et al. AG01, QDE-2, and RDE-1 are related proteins required for post-transcriptional gene silencing in plants, quelling in fungi, and RNA interference in animals. *PNAS* 97, 11650-11654 (10 Oct. 2000).	
	AU	Fire, A. RNA-triggered gene silencing. *Trends Genet.* 15, 358-363 (1999).	
	AV	Fire, A. et al. Potent and specific genetic interference by double-stranded RNA in Caenorhabditis elegans. *Nature* 391, 806-811 (1998).	
	AW	Fortier, E. & Belote, J.M. Temperature-Dependent Gene Silencing by an Expressed Inverted Repeat in Drosophila. *Genesis* 26, 240-244 (2000).	
	AX	Gillespie, D.E. & Berg, C.A. homeless is required for RNA localization in Drosophila oogenesis and encodes a new member of the DE-H family of RNA-dependent ATPases. *Genes Dev.* 9, 2495-2508 (1995).	
	AY	Guo, S. & Kemphues, K.J. par-1, a Gene Required for Establishing Polarity in C. elegans Embryos, Encodes a Putative Ser/Thr Kinase that is Asymmetrically Distributed. *Cell* 81, 611-620 (1995).	
	AZ	Hamilton, J.A. & Baulcombe, D.C. A Species of Small Antisense RNA in Posttranscriptional Gene Silencing in Plants. *Science* 286, 950-952 (1999).	
	BA	Hammond, S.M. et al. An RNA-directed nuclease mediates post-transcriptional gene silencing in Drosophila cells. *Nature* 404, 293-296 (2000).	
	BB	Hunter, C. Genetics: A touch of elegance with RNAi. *Curr. Biol.* 9, R440-R442 (1999).	
	BC	Jacobsen, S.E. et al. Disruption of an RNA helicase/RNAse III gene in Arabidopsis causes unregulated cell division in floral meristems. *Development* 126, 5231-5243 (1999).	
	BD	Jones, A.L. et al. De novo methylation and co-suppression induced by a cytoplamically replicating plant RNA virus. *EMBO J.* 17, 6385-6393 (1998).	

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Sheet	3	of	5	Attorney Docket Number	GNCA-P03-007

	BE	Jones, L. et al. RNA-DNA Interactions and DNA Methylation in Post-Transcriptional Gene Silencing. *Plant Cell* 11, 2291-2301 (Dec. 1999).	
	BF	Kalejta, R.F. et al. An Integral Membrane Green Fluorescent Protein Marker, Us9-GFP, is Quantitatively Retained in Cells during Propidium Iodide-Based Cell Cycle Analysis by Flow Cytometry. *Exp. Cell. Res.* 248, 322-328 (1999).	
	BG	Kennerdell, J.R. & Carthew, R.W. Use of dsRNA-Mediated Genetic Interference to Demonstrate that frizzled and frizzled 2 Act in the Wingless Pathway. *Cell* 95, 1017-1026 (1998).	
	BH	Kennerdell, J.R. & Carthew, R.W. Heritable gene silencing in Drosophila using double-stranded RNA. *Nat. Biotechnol.* 17, 896-898 (2000).	
	BI	Ketting, R.F. et al. mut-7 of *C. elegans*, Required for Transposon Silencing and RNA Interference, Is a Homolog of Werner Syndrome Helicase and RNaseD. *Cell* 99, 133-141 (1999).	
	BJ	Kramer, E.R. et al. Activation of the human anaphase-promoting complex by proteins of the CDC20/Fizzy family. *Curr. Biol.* 8, 1207-1210 (1998).	
	BK	Lam, G. & Thummel, C.S. Inducible expression of double-stranded RNA directs specific genetic interference in Drosophila. *Curr. Biol.* 10, 957-963 (2000).	
	BL	Lohmann, J.U. et al. Silencing of Developmental Genes in Hydra. *Dev. Biol.* 214, 211-214 (1999).	
	BM	Matsuda, S. et al. Molecular cloning and characterization of a novel human gene (HERNA) which encodes a putative RNA-helicase. *Biochim. Biophys. Acta* 1490, 163-169 (2000).	
	BN	Misquitta, L. & Paterson, B.M. Targeted disruption of gene function in Drosophila by RNA interference (RNA-i): A role for nautilus in embryonic somatic muscle formation. *PNAS* 96, 1451-1456 (Feb. 1999).	
	BO	Montgomery, M.K. et al. RNA as a target of double-stranded RNA-mediated genetic interference in Caenorhabditis elegans. *PNAS* 95, 15502-15507 (Dec. 1998).	
	BP	Montgomery, M.K. & Fire, A. Double-stranded RNA as a mediator in sequence-specific genetic silencing and co-suppression. *Trends Genet.* 14, 255-258 (1998).	
	BQ	Mourrain, P. et al. Arabidopsis SGS2 and SGS3 Genes are Required for Posttranscriptional Gene Silencing and Natural Virus Resistance. *Cell* 101, 533-542 (2000).	
	BR	Ngo, H. et al. Double-stranded RNA induces mRNA degradation in Trypanosoma brucei. *PNAS* 95, 14687-14692 (Dec. 1998).	
	BS	Ratcliff, F. et al. A Similarity Between Viral Defense and Gene Silencing in Plants. *Science* 276, 1558-1560 (1997).	

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	BT	Sanchez Alvarado, A. & Newmark, P.A. Double-stranded RNA specifically disrupts gene expression during planarian regeneration. *PNAS* 96, 5049-5054 (April 1999).	
	BU	Schneider, I. Cell lines derived from late embryonic stages of Drosophila melanogaster. *J. Embryol. Exp. Morpho.* 27, 353-365 (1972).	
	BV	Sharp, P.A. RNAi and double-strand RNA. *Genes Dev.* 13, 139-141 (1999).	
	BW	Shi, H. et al. Genetic interference in Typanosoma brucei by heritable and inducible double-stranded RNA. *RNA* 6, 1069-1076 (2000).	
	BX	Shuttleworth, J. & Colman, A. Antisense oligonucleotide-directed cleavage of mRNA in Xenopus oocytes and eggs. *EMBO J.* 7, 427-434 (1988).	
	BY	Sijen, T. & Kooter, J.M. Post-transcriptional gene-silencing: RNAs on the attack or on the defense? *Bioessays* 22, 520-531 (2000).	
	BZ	Smardon, A. et al. EGO-1 is related to RNA-directed RNA polymerase and functions in germ-line development and RNA interference in C. elegans. *Curr. Biol.* 10, 169-178 (2000).	
	CA	Smith, N.A. et al. Total silencing by intron-spliced hairpin RNAs. *Nature* 407, 319-320 (2000).	
	CB	Tabara, H. et al. RNAi in C. elegans: Soaking in the Genome Sequence. *Science* 282, 430-432 (1998).	
	CC	Tabara, H. et al. The rde-1 Gene, RNA Interference, and Transposon Silencing in C. elegans. *Cell* 99, 123-132 (1999).	
	CD	Tavernarakis, N. et al. Heritable and inducible genetic interference by double-stranded RNA encoded by transgenes. *Nat. Genet.* 24, 180-183 (2000).	
	CE	Timmons, L. & Fire, A. Specific interference by ingested dsRNA. *Nature* 395, 854 (1998).	
	CF	Tuschl, T. et al. Targeted mRNA degradation by double-stranded RNA in vitro. *Genes Dev.* 13, 3191-3197 (1999).	
	CG	Vaucheret, H. et al. Transgene-induced gene silencing in plants. *Plant J.* 16, 651-659 (1998).	
	CH	Wassenegger, M. & Pelissier, T. A model for RNA-mediated gene silencing in higher plants. *Plant Mol. Biol.* 37, 349-362 (1998).	
	CI	Waterhouse, P.M. et al. Virus resistance and gene silencing in plants can be induced by simultaneous expression of sense and antisense RNA. *PNAS* 95, 13959-13964 (Nov. 1998).	
	CJ	Wianny, F. & Zernicka-Goetz, M. Specific interference with gene function by double-stranded RNA in early mouse development. *Nature Cell Biol.* 2, 70-75 (2000).	
	CK	Wolf, D.A. & Jackson, P.K. Cell cycle: Oiling the gears of anaphase. *Curr. Biol.* 8, R636-R639 (1998).	

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First Named Inventor	David Beach
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Examiner Name	Not Yet Assigned
Attorney Docket Number	GNCA-P03-007

	CL	Zamore, P.D. et al. RNAi: Double-Stranded RNA Directs the ATP-Dependent Cleavage of mRNA at 21 to 23 Nucleotide Intervals. *Cell* 101, 25-33 (2000).	

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